

# POTASSIUM IODIDE (KI) FACT SHEET

## What is potassium iodide?

Potassium iodide is a chemical compound that contains iodine, which is necessary for the normal functioning of the thyroid gland. It is known by its chemical symbol, KI.

Potassium iodide is the iodine in iodized salt. Most people ingest it every day without being aware of it.

Potassium iodide is also manufactured in pill form to be used as a supplement to help prevent the thyroid gland from absorbing radioactive iodine that might be released during an emergency at a nuclear power plant. It is intended to protect against thyroid gland cancer caused by radioactive iodine.

**Potassium iodide is not an “anti-radiation” pill. It is a supplemental protective measure, secondary to evacuation or sheltering in place. Evacuation and sheltering in place remain the primary protective action during a radiological emergency.**

## How does it work?

Potassium iodide protects the thyroid gland by satisfying its requirement for iodine. When taken under the direction of state or local public health officials, potassium iodide is absorbed into the thyroid gland, thus protecting it from absorbing any radioactive iodine.

Potassium iodide does not protect parts of the body other than the thyroid gland, nor does it provide protection against other forms of radiation.

## Who can take potassium iodide?

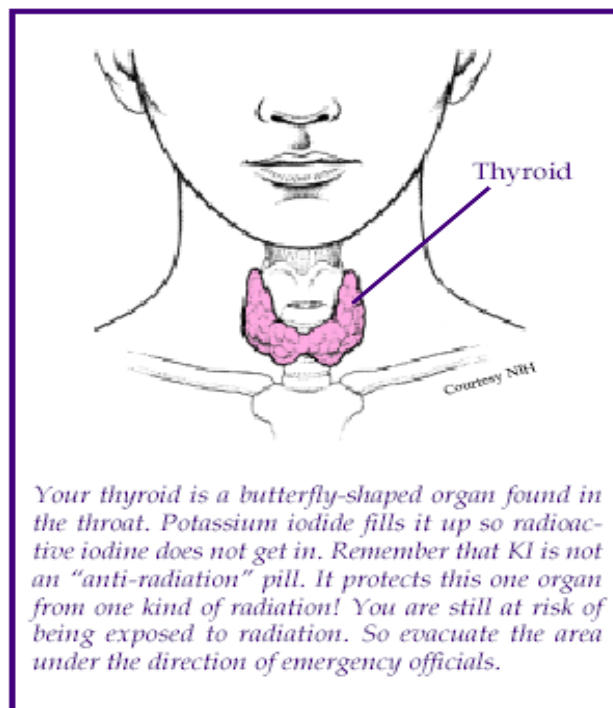
Most people can take potassium iodide without side effects. A small number of people could have an adverse reaction. **Anyone with an existing thyroid gland condition and allergic to iodine or shellfish should NOT take it.** Consult your physician if unsure whether you should take potassium iodide.

## How will I know when to take potassium iodide?

To be effective, potassium iodide should be taken immediately before or within a few hours after exposure to radioactive iodine. Take potassium iodide **only** at the direction of state or local public health officials, who will decide the most appropriate time to do so. The recommendation will be announced through the Emergency Alert System and the news media. People living or working within the Emergency Planning Zones around the Diablo Canyon Power Plant and San Onofre Nuclear Generating Station should review the community information section in their local phone book for details on emergency notification.

## What would happen if I took potassium iodide without being told to?

It is very unlikely that you would suffer any ill effects if you took potassium iodide because of a false alarm or “just in case” you thought a radiological emergency was under way. The potassium iodide would simply pass through the body in a day or two.



## What are the side effects of potassium iodide?

Side effects are unlikely because of the low dose and the short time you will take the drug.

Possible side effects include skin rashes, swelling of the salivary glands, and “iodism” (metallic taste, burning mouth and throat, sore teeth and gums, symptoms of a head cold and sometimes stomach upset and diarrhea).

A few people have an allergic reaction with more serious symptoms. Those could be fever and joint pain, or swelling of parts of the face and body and at times severe shortness of breath requiring immediate medical attention.

Taking iodide may rarely cause over activity, under activity, or enlargement of the thyroid gland (goiter.)

## What should I do if side effects occur?

If the side effects are severe or if you have an allergic reaction, stop taking potassium iodide. Call a doctor or public health authority for instructions.

## Should I have potassium iodide for my Children?

Very young children (under 14 years old) are more susceptible to thyroid gland cancer than adults because they are growing rapidly. Therefore, you should request potassium iodide for not only the adults in your home, but also for any children.

Potassium iodide presently comes in 130-mg pills, which is the recommended adult dosage. The U.S. Food and Drug Administration (FDA) recognizes that it may be difficult to cut the potassium iodide tablets into smaller portions and give them to children. To make potassium iodide easier for infants and children to take, crush the tablet (130mg) in a small bowl and add 4 teaspoons (not tablespoons) of water, stir until dissolved, then add 4 teaspoons of flavored drink such as juice, flat cola or chocolate milk, or formula (to hide the taste.) Then give them the following amount:

- Age 3 to 12 years – 4 teaspoons of the mixture  
= ½ tablet or 65 mg.
- Age 1 month to 3 years – 2 teaspoons of the mixture  
= ¼ tablet or 32.5 mg.
- Age birth to 1 month – 1 teaspoon of the mixture  
= 1/8 tablet or 16.25 mg.

In the first few weeks of life an infant is more prone to developing thyroid problems from too large a dose. In this age group, it is important not to give more than directed and to see a physician to check the thyroid within a week or two after the dose is given. After the first month, side effects or complications of too much iodine are unlikely. When directed to give KI in an emergency it may be better to give children over 1 month a larger dose than none at all if it is difficult to precisely divide the dose. Do not give solid tablets to children under 3 as they may cause choking.

## Is taking potassium iodide mandatory?

No. The use of potassium iodide is voluntary. No one is required to accept it or use it.

## Where can I get potassium iodide?

Two potassium iodide pills are being offered free-of-charge by the Governor's Office of Emergency Services, to anyone who lives or works in communities located in the Emergency Planning Zones around the Diablo Canyon Power Plant and San Onofre Nuclear Generating Station.

For those who wish to do so, additional potassium iodide can be purchased in some local pharmacies or ordered from several commercial manufacturers by

telephone, mail, or via the Internet. Since 1983, there were two FDA approved products; "Iosat" (Anbex, Inc.), 1-866-463-6754 and "Thyro-Block (MedPOinte, Inc.) which supply wholesale only. The FDA just recently approved "Thyrosafe", 1-866-849-7672.

## For more information contact:

Governor's Office of Emergency Services  
P.O. Box 419047  
Rancho Cordova, CA 95741  
1-800-550-5234

<http://www.oes.ca.gov>

<http://www.fda.gov>

<http://www.nrc.gov>


<http://www.anbex.com>

<http://www.thyrosafe.com>

## References

US Food and Drug Administration (FDA) Center for Drug Evaluation and Research, Division of Pharmaceutical Analysis.

FDA, Guidance: Potassium Iodide as a Thyroid Blocking Agent in Radiation Emergencies, December 2001.



## How Much KI To Take

Actual size of KI tablet and Packet  
1 tablet = 130 milligrams of KI

	DOSE
Adults 18 Years and Older	1 Tablet
Pregnant or Nursing Women	1 Tablet
Adolescent 12-18 Years Old	½ to 1 Tablet*
Children 3-12 years old	½ Tablet
Children 1 month to 3 Years Old	¼ Tablet
Infants Birth to 1 Month	1/8 Tablet

\* Adolescents approaching adult size (equal to or greater than 154 pounds should receive the full adult dose.